

Confidential

Clean power 2030 advice to Government

October 2024

Agenda

1. Introduction to NESO
2. Context – what have been tasked to do?
3. Approach to analysis & engagement
4. Supply and demand pathways to clean power
5. Q&A

PW141024

What does National Energy System Operator do?



We are the National Energy System Operator for Great Britain, making sure that Great Britain has the **essential energy it needs by ensuring supply meets demand** every second of every day.

NESO is built on our previous experience as the Electricity System Operator (ESO), where we had an extensive track record in balancing electricity supply and demand 24/7, whilst making sure the networks we operated and the markets we served were prepared for the future.

We are a **public body, independent of the energy industry and Government**. One of our main responsibilities is to provide **independent advice to UK Government** and the regulator.

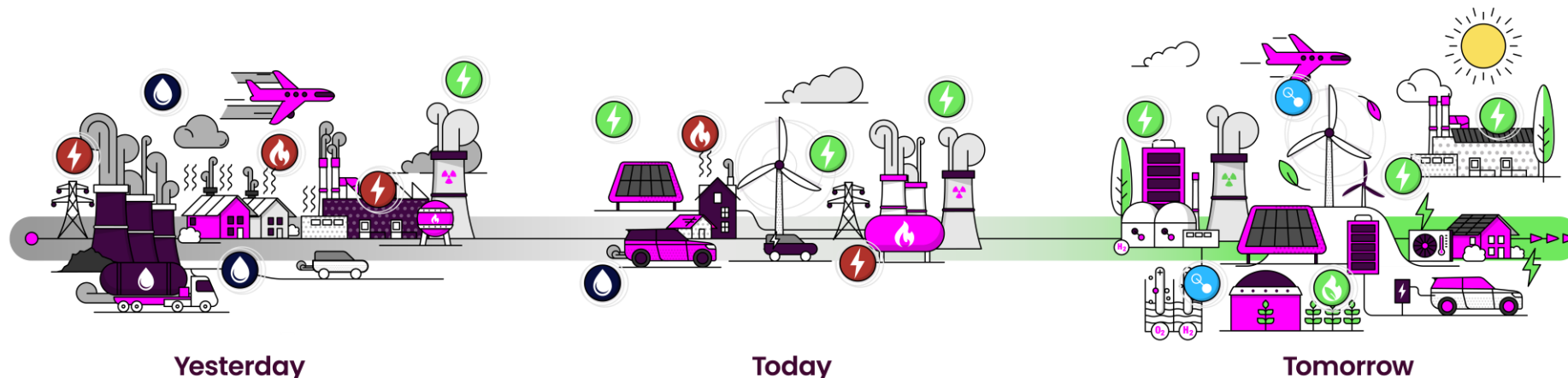
Context – what has Government asked NESO to do?

HM Government has an ambition for Britain to be supplied with clean power by 2030.

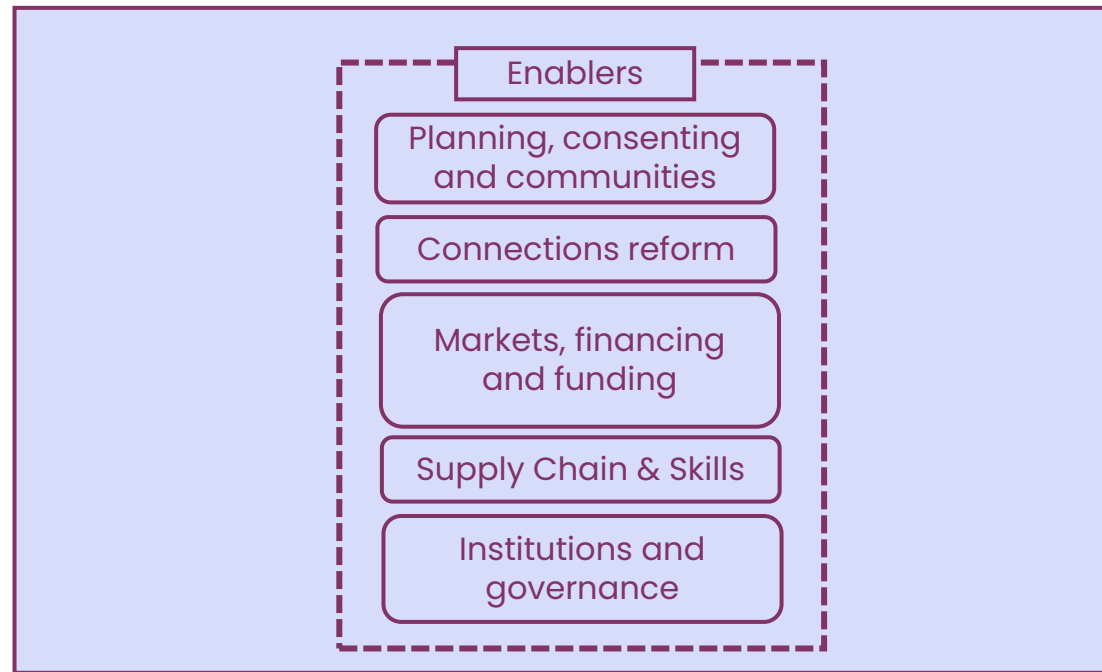
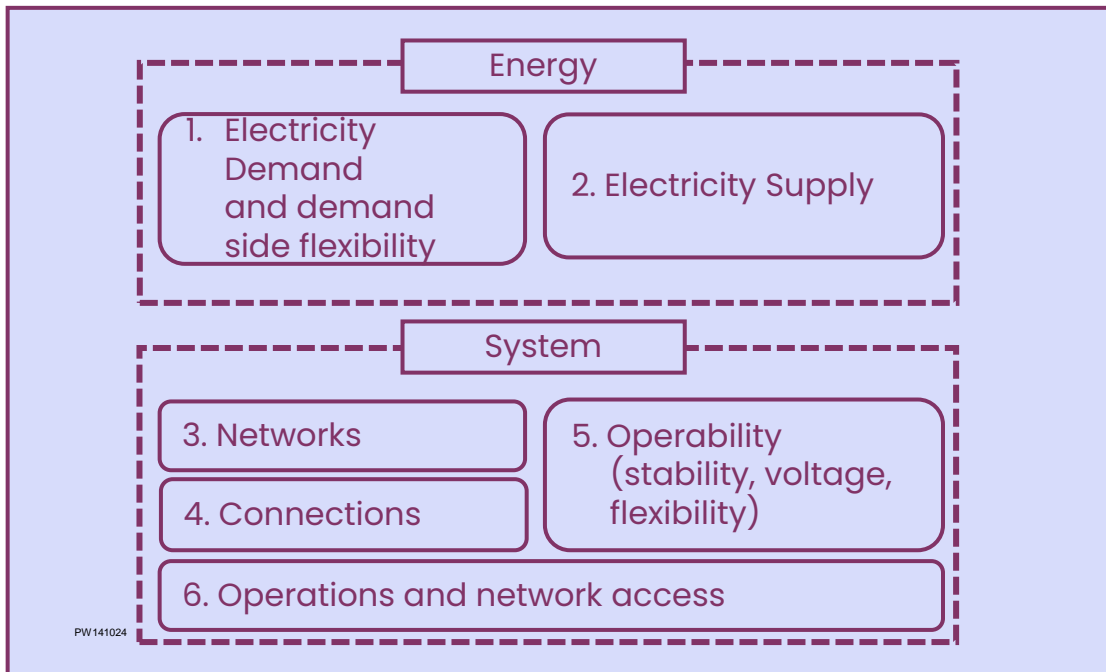
HM Government has made this one of their five Government missions, creating a Mission Control, led by Chris Stark, to deliver this. Mission Control are overseeing the delivery of a clean power 2030 plan, consistent with long-term net zero, security of supply and affordability objectives.

The National Energy System Operator has been asked to provide independent advice on the pathway towards the 2030 ambition, with expert analysis of the location and type of new investment and infrastructure needed to deliver it. We will submit our advice to Government and publish it in Autumn 2024, with the Government expected to publish a plan by the end of the year.

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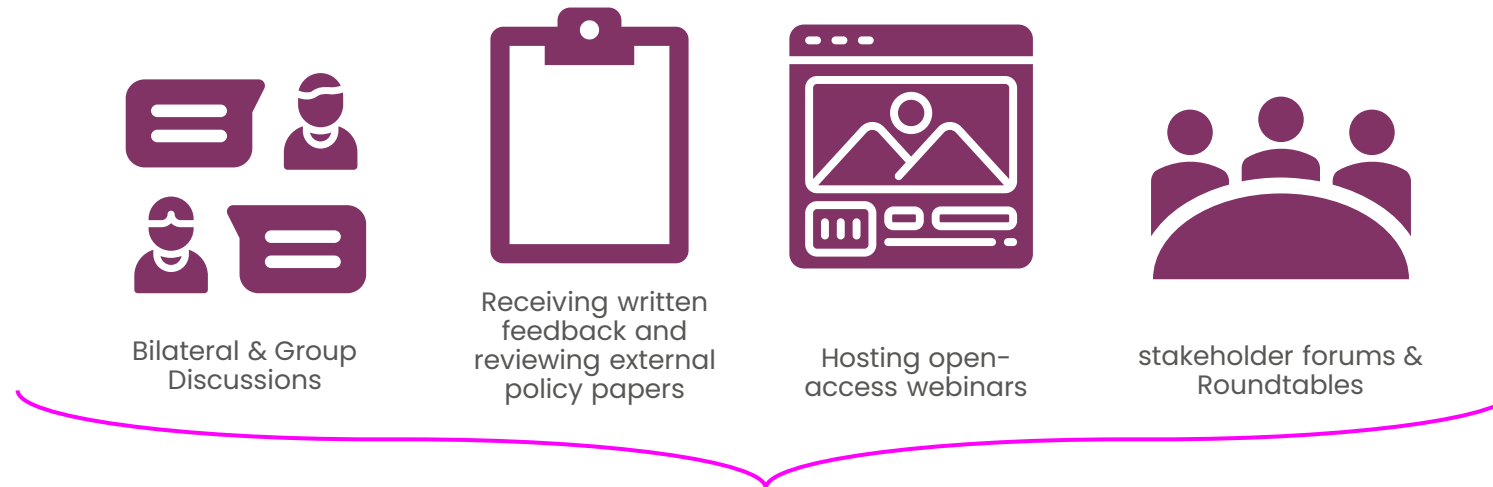


Different components of NESO's clean power analysis



Critical considerations such as **emissions and environment, consumer and community impacts, energy security, whole energy and beyond 2030 and economic impact** cut across the six key elements.

How we are engaging stakeholders and receiving feedback



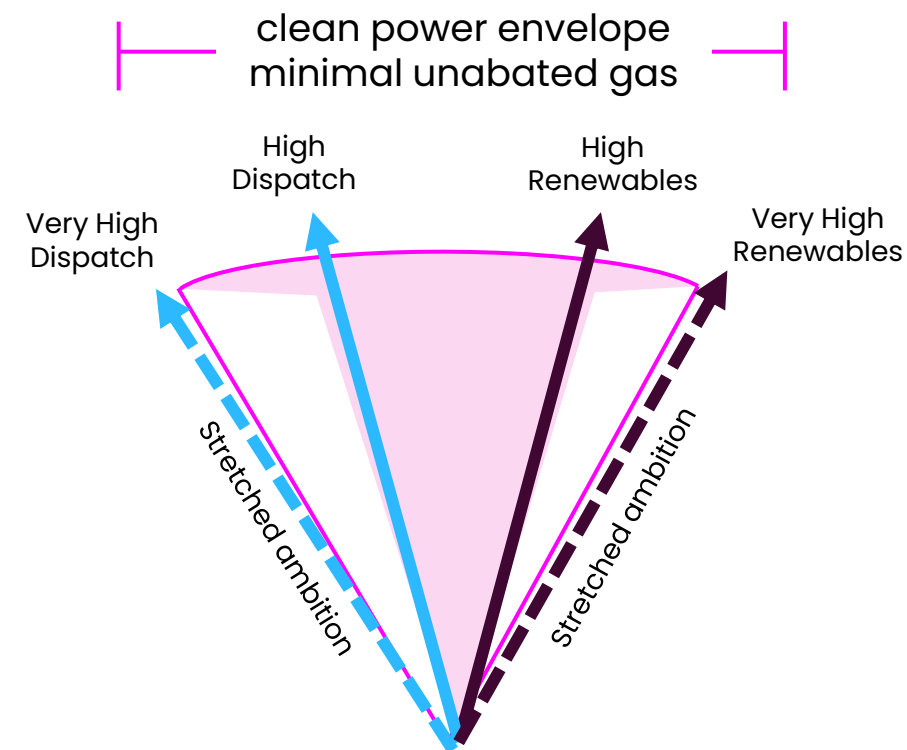
- NESO are engaging with stakeholders through various methods.
- ^{PW14102} Alongside other engagement, we have established two industry and societal stakeholder forums to share and test our interim analysis with, we are primarily using trade and membership bodies to ensure information is cascaded equitably.

Potential pathways to clean power NESO are examining

**analysis subject to final review and challenge*

- NESO developed three pathways to clean power by 2030, these were examining a high renewables roll out, increasing the use of energy flexibility and low carbon dispatchable power.
- After feedback from other industry experts on the feasibility of our high renewables range and high dispatchable range and the importance of flexibility in all pathways – we have responded by adapting the approach.
- NESO are now exploring two primary pathways as well as the upper limits within them. The primary pathways are outlined below:

Pathway	[High Renewables and Flexibility]	[High Dispatch]
<small>PW141024</small> Pathway description	Fast development of renewables alongside the highest level of energy storage capacity and consumer engagement in demand flexibility. Minimal new dispatchable low carbon power.	Growth in renewables but the lowest of the pathways. Deployment of low carbon dispatchable power alongside the highest nuclear capacity.



Increased demand and system flexibility is embedded into both pathways but more active in the high renewables pathways.

Further sensitivities: batteries, carbon price, nuclear, weather years and increased demand

Question and Answer Session

PW141024